

WHAT IS CLAIMED

1. A device for determining the pressure exerted within an anatomical structure, said device comprising:

a) a sensor positionable within an anatomical structure, said sensor being operative to produce a signal corresponding to the pressure exerted within said anatomical structure; and

b) a monitor coupled to said sensor for receiving said signal generated thereby, said monitor being operative to provide a quantifiable indication of the compressive force exerted within said anatomical structure.

2. The device of Claim 1 wherein said sensor comprises an encapsulated lattice structure.

3. The device of Claim 2 wherein said lattice structure is operative to selectively collapse upon application of a threshold compressive force applied externally upon said lattice structure.

4. The device of Claim 3 wherein said lattice structure is operative to incrementally collapse such that the volume therewithin is caused to incrementally decrease upon application of incrementally increasing pressure beyond said threshold pressure upon said exterior of said lattice structure such that said incremental collapse within said lattice corresponds to an incremental increase in pressure applied externally thereabout.

5. The device of Claim 2 wherein said lattice structure is formed from a plastic material.

6. The device of Claim 1 wherein said sensor comprises a member having a quantity of compressive foam disposed therein, said compressive foam being operatively transitional between a first expansive state when a first baseline amount of pressure is applied thereto and a second compressed state whereby said foam compresses to assume a configuration having a reduced volume corresponding to a second higher amount of pressure applied upon the external surface of said member.

7. The device of Claim 2 wherein said lattice structure is operatively transitional between a first non-collapsed configuration such that said lattice structure defines a predetermined volume and a second collapsed configuration whereby said lattice structure

defines a volume that is less than said predetermined volume maintained in said first configuration.

8. The device of Claim 6 wherein said foam is operative to incrementally decrease in volume when a correspondingly incremental increase in pressure applied to the external surface of said member.

9. The device of Claim 2 wherein said lattice structure is encapsulated within a balloon-type sack.

10. The device of Claim 7 wherein said member is encapsulated within a balloon-type sack.

11. A device for determining the amount of pressure exerted between a first anatomical structure and a second anatomical structure, said device comprising:

a) a sensor interposable between said first anatomical structure and said second anatomical structure, said sensor being operative to produce a signal corresponding to the compressive force exerted between said first anatomical structure and said second anatomical structure; and

b) a monitor coupled to said sensor for receiving said signal generated thereby, said monitor being operative to provide a quantifiable indication of the compressive force between said first anatomical structure and said second anatomical structure.

12. The device of Claim 11 wherein said sensor comprises an encapsulated lattice structure.

13. The device of Claim 12 wherein said lattice structure is operative to selectively collapse upon application of a threshold compressive force applied externally upon said lattice structure.

14. The device of Claim 13 wherein said lattice structure is operative to incrementally collapse such that the volume therewithin is caused to incrementally decrease upon application of incrementally increasing pressure beyond said threshold pressure upon said exterior of said lattice structure such that said incremental collapse within said lattice corresponds to an incremental increase in pressure applied externally thereabout.

15. The device of Claim 12 wherein said lattice structure is formed from a plastic material.

16. The device of Claim 11 wherein said sensor comprises a member having a quantity of compressive foam disposed therein, said compressive foam being operatively transitional between a first expansive state when a first baseline amount of pressure is applied thereto and a second compressed state whereby said foam compresses to assume a configuration having a reduced volume corresponding to a second higher amount of pressure applied upon the external surface of said member.

17. The device of Claim 12 wherein said lattice structure is operatively transitional between a first non-collapsed configuration such that said lattice structure defines a predetermined volume and a second collapsed configuration whereby said lattice structure defines a volume that is less than said predetermined volume maintained in said first configuration.

18. The device of Claim 16 wherein said foam is operative to incrementally decrease in volume when a correspondingly incremental increase in pressure applied to the external surface of said member.

19. The device of Claim 12 wherein said lattice structure is encapsulated within a balloon-type sack.

20. The device of Claim 17 wherein said member is encapsulated within a balloon-type sack.

21. A method for measuring and monitoring the amount of pressure within an anatomical structure:

a) providing a sensor positionable within said anatomical structure, said sensor being operative to produce a signal corresponding to the degree of pressure inside said structure;

b) providing a monitor, said monitor being coupled to said sensor and operative to provide a quantifiable indication of the degree of pressure inside said structure as indicated by said signal generated by said sensor;

c) inserting said sensor within said anatomical structure; and

d) monitoring said signal generated by said sensor positioned in step (c) by said monitor provided in step (b).

22. The method of Claim 14 wherein in step (a), said sensor comprises an encapsulated member having an internal pressure sensor such that in use, when an increase in

pressure is applied externally to said encapsulated member, said member generates a signal corresponding to the amount of pressure applied externally to said member.

23. The method of Claim 14 wherein in step (a), said sensor comprises an encapsulated member having an internal volume sensor such that in use, when an increase in pressure is applied externally to said member, said member generates a signal corresponding to the amount of volumetric space within said member.

24. A method for measuring and monitoring the amount of pressure exerted between a first anatomical structure and a second anatomical structure comprising the steps:

- a) providing a sensor interposable between said first anatomical structure and said second anatomical structure, said sensor being operative to produce a signal corresponding to the degree of compressive force exerted between said first anatomical structure and said second anatomical structure;
- b) providing a monitor, said monitor being coupled to said sensor and operative to provide a quantifiable indication of the degree of compressive force exerted between said first anatomical structure and said second anatomical structure as indicated by said signal generated by said sensor;
- c) interposing said sensor between said first anatomical structure and said anatomical structure; and
- d) monitoring said signal generated by said sensor positioned in step (c) by said monitor provided in step (b).

25. The method of Claim 24 wherein in step (a), said sensor comprises an encapsulated member interposable between said first anatomical structure and said second anatomical structure, said member having an internal pressure sensor such that in use, when an increase in pressure is applied externally to said balloon member, said member generates a signal corresponding to the amount of pressure applied externally to said balloon member.

26. The method of Claim 24 wherein in step (a), said sensor comprises an encapsulated member interposable between said first anatomical structure and said second anatomical structure, said member having an internal volume sensor such that in use, when an increase in pressure is applied externally to said member, said balloon generates a signal corresponding to the amount of volumetric space within said member.